



# BS250

250ml Bottle Sampling Unit

## User Guide



[www.mpfiltri.co.uk](http://www.mpfiltri.co.uk)

200.049-EN

Covers Model Numbers

BS250

## **SAFETY WARNING**

Hydraulic systems contain dangerous fluids at high pressures and temperatures. Installation, servicing and adjustment is only to be performed by qualified personnel.

Do not tamper with this device.

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# **1 Precautions**

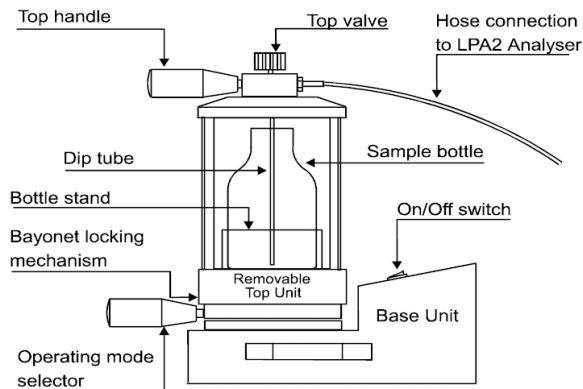
## **1.1 Internal Cleaning**

DO NOT clean the Bottle Sampler with Acetone or similar solvents that are not compatible with the seals. The recommended cleaning fluid for internal flushing is listed on the website: [www.mpfiltr.co.uk](http://www.mpfiltr.co.uk)

## 2 Scope of Supply

Each standard Bottle Sampler supplied consists of the following:-

- 1 x 250ml Bottle Sampler, base unit and removable top chamber
- 1 x BS250 User guide
- 1 x 0.6m Minimess hose
- 5 x 200ml bottles
- 1 x Bottle stand
- 1 x 12V DC power supply (Mascot 9887), with rated output of 12V DC, 3.33amp maximum current. DC connector is centre pin positive. ***Important: do not use the particle analyser power supply with the 250ml bottle sampling unit, as it has an inadequate power rating***



**Figure 2.1**

# 3 Introduction

The Bottle Sampler is an aid to accurate contamination monitoring suitable for laboratory applications utilising mineral oil as the operating fluid. Please contact your local sales office for alternative fluid options.

The Bottle Sampling Unit has the optional facility to de-aerate the fluid sample, prior to testing with the analyser, by applying a vacuum to the chamber holding the sample bottle.

The two main components are locked together with a bayonet style mechanism.

The Sample bottle is placed on the bottle stand which is located in the base unit.

The Bottle Sampler is designed to accept 200ml and 250ml bottles.

Due to the limited fluid volume available and the requirement of a 3 minute flush period prior to a sample test, the moisture sensor test should not be performed utilising the bottle sampling method.

## 4 Procedure

Refer to key drawing on page 6.

1. Draw off a sample of oil (150 ml. minimum) from the system into the bottle provided. If this is impractical then use the hand pump, clean bottle and hose provided to draw off a sample of fluid.

*Note: Please ensure that the pump and hose are cleaned with an appropriate filtered solvent (i.e. petroleum ether) prior to the sample being taken.*

***Sample bottles and associated products are to be cleaned in accordance with the instructions on page 12.***

*Important! Do NOT use acetone*

2. Insert waste fluid hose into the waste bottle provided.
3. Connect waste fluid hose to analyser (waste connector).
4. Connect the 12V DC supply to bottle sampler, using power adaptor supplied.

### 4.1 De-aeration

For full compliance please refer to standard BS11500:2008

5. Agitate sample for minimum 60 seconds.



6. Place the sample bottle into the bottle sampler.
7. Fit removable top unit and lock in place.
8. Screw top valve clockwise until slight resistance is felt, to close valve.
9. Turn the operating mode selector to the position nearest the yellow disc marked V.
10. Switch ON the bottle sampling unit and leave running for several minutes, until all air bubbles have been removed from the fluid sample. *Note: It may be necessary to vent the chamber on occasion, to stop spill over due to foaming.*

## 4.2 Operating with Particle Analyser

11. Switch OFF the bottle sampler and turn the operating mode selector to the position nearest the red disc marked P.

*Note: the top valve must not be opened BEFORE the operating mode selector has been changed to the position P. To do so, could allow fluid to reverse flow back into the sample bottle and contaminate the sample.*

12. Connect minimess hose (0.6m) to bottle sampling connection.
13. Connect minimess hose to particle analyser.
14. Screw the top valve on the bottle sampler anticlockwise to open the valve.
15. Switch ON the particle analyser.

16. Select Triple or Bottle Sampling option.
17. Enter test details, for more information refer to the particle analyser user guide.
18. Switch ON the bottle sampler.
19. Wait for approximately 1 minute to allow the pump to reach maximum pressure (2 bar)
20. Flush the analyser for a minimum of 30 seconds.
21. Start the test.

The Bottle Sampling Test is a three test analysis, as described in the analyser user guide.

22. Upon test completion, after the emptying cycle is completed, switch OFF the bottle sampler.
23. Turn the operating mode selector slowly to the position nearest the yellow disc marked V. This quietly vents the pressurised chamber to atmosphere.
24. Remove the top unit and remove the sample bottle.

***Note: do not allow oil to drip from the dip tube onto the pressure/vacuum port. The pressure/vacuum port is the small vertical tube that can be seen in the base unit after the top unit has been removed.***

25. Switch OFF the particle analyser.

## 4.3 Pump Operation

The diaphragm pump inside the bottle sampling unit is not designed to start against pressure. Therefore, only switch on the bottle sampling unit when the pressurised chamber is at or below atmospheric pressure, i.e. in accordance with the instruction in this user guide. If the bottle sampling unit is inadvertently switched on when the pressurised chamber is under pressure, it might switch on as normal, or the bottle sampling unit LED might flash intermittently, depending in operating conditions at the time.

# 5 Sample Bottle Cleaning Procedure

For optimum results the bottle sampling procedure should only be taken when the procedure for qualifying and controlling methods for sampling containers and products conform to ISO 3372.

However, the following routine may be utilised, if the above routine cannot be completed:

- Half fill the sampling bottle with the fluid to be analysed.
- Re-cap the bottle and shake vigorously for 30 seconds.
- Dispose of the fluid (in accordance with current COSHH legislation).
- Repeat the above procedure another two times.

When bottle is filled, fourth time, this is the sample that will be analysed.

# 6 Information

## 6.1 Warranty

The BS250 is guaranteed for 12 months upon receipt of the unit, subject to it being used for the purpose intended and operated in accordance with this User Guide.

## 6.2 Spare Product / Part Numbers

[www.mpfiltri.co.uk](http://www.mpfiltri.co.uk)

## 6.3 Flushing Fluids

***DO NOT USE ACETONE***

For information about the items on this page please see the website:

[www.mpfiltri.co.uk](http://www.mpfiltri.co.uk)

# 7 Fault Finding

## FAULT

*Unexpected results  
obtained from sample*

*Bottle sampler not  
reaching required  
pressure.*

## CHECK

Check that the minimess hose has been fully connected at both the bottle sampler and the CMPends.

Confirm that there is a free flow of fluid to the CMP, by operating the flush valve and observing fluid passing to waste.

Re-grease o-ring in the base of bottle sampler.

***Produced by MP Filtri UK***

## **Revision 5**

As a policy of continual improvement, MP Filtri UK reserve the right to alter specifications without prior notice.

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MP FILTRI UK Limited,  
Bourton Industrial Park,  
Bourton-on-the-Water,  
GL54 2HQ, U.K.

Tel: +44.1451-822522  
Fax: +44.1451-822282  
Email: sales@mpfiltri.co.uk  
Website: www.mpfiltri.co.uk

**www.mpfiltri.co.uk**

#### **ITALY - HEADQUARTERS**

MP FILTRI S.p.A.  
Tel: +39.02/95703.1  
Fax: +39.02/95741497-95740188  
Email: sales@mpfiltri.com  
Website: www.mpfiltri.com

#### **CANADA**

MP FILTRI CANADA INC.  
Tel: +1.905-303-1369  
Fax: +1.905-303-7256  
Email: mail@mpfiltricanada.com  
Website: www.mpfiltricanada.com

#### **CHINA**

MP FILTRI (Shanghai) Co Ltd  
Tel: +86.21-58919916  
Fax: + 86.21-58919667  
Email: sales@mpfiltrishanghai.com  
Website: www.mpfiltrichina.com

#### **GERMANY**

MP FILTRI D GmbH  
Tel: +49.6806-85022.0  
Fax: + 49.6806-85022.18  
Email: service@mpfiltri.de  
Website: www.mpfiltri.com

#### **FRANCE**

MP FILTRI FRANCE  
Tel: +33.1.40-86-47-00  
Fax: +33.1-40-86-47-09  
Email: contact@mpfiltrifrance.com  
Website: www.mpfiltri.com

#### **INDIA**

MP FILTRI INDIA  
Tel: +91 9945599899  
Email: s.mishra@mpfiltri.com  
Website: www.mpfiltri.com

#### **RUSSIAN FEDERATION**

MP FILTRI RUSSIA INC  
Phone mobile: +7.095-502-5411  
Fax: +7.095-205-9410  
Email: mpfiltrirussia@yahoo.com  
Website: www.mpfiltri.ru

#### **USA**

MP FILTRI USA Inc.  
Tel: +1.215-529-1300  
Fax: +1.215-529-1902  
Email: sales@mpfiltriusa.com  
Website: www.mpfiltriusa.com

#### **UAE**

MP FILTRI UEA  
Tel: +91 9945599899  
Email: s.mishra@mpfiltri.com  
Website: www.mpfiltri.com